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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/133,989	08/14/1998	TRUNG T DOAN	93-0421.03	7303

7590 10/07/2003

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BOISE, ID 837169632

EXAMINER
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EDWARDS, LAURA ESTELLE

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 26

Application Number: 09/133,989  
Filing Date: August 14, 1998  
Appellant(s): DOAN, TRUNG T

Charles B. Brantley II  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 7/21/03.

**(1) *Real Party in Interest***

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A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: Whether the Examiner has failed to establish anticipation in light of Honda with Fisch cited to show inherency.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 14, 22-29, and 31-33; 28; 12-13, 17-33; and 14-16 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *Claims Appealed***

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The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

JP 8-5825	HONDA	1-1996
4,314,022	FISCH	2-1982
JP-2-157763	ISONO	6-1990
4,685,975	KOTTMAN ET AL	8-1987
JP 56-73579	UCHIDA ET AL	6-1981

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 14, 22-29, and 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Honda (JP 8-5825) with Fisch (US 4,314,022).

Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Isono (JP 2-157763).

Claims 12, 13, and 17-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kottman et al (US 4,685,975) in view of Honda (JP 8-5825).

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al (JP 56-73579) in view of Honda (JP 8-5825).

These rejections are set forth in prior Office Action, Paper No. 23.

**(11) Response to Argument**

Appellant contends that Honda does not teach a developer that is a solvent because Honda teaches that the developer is applied and additional processing is required such that if the developer was a solvent then it would dissolve all underlying resin and no further processing would be required.

Appellant's argument with respect to additional processing of the wafer neither proves nor disproves that the Honda developer is a solvent. The additional processing only provides evidence that the developer used by Honda is of a sufficient strength to remove resin build-up after the resist is applied to the wafer.

Appellant contends that Honda does not teach a developer that is a solvent and Fisch does not support the inherency argument asserted by the Examiner, of a developer acting as a solvent, because Honda and Fisch developers behave or react differently to photoresist.

Regardless of the behavior exhibited by the developer(s) of Fisch in comparison to the developer used by Honda, the inherency argument is sustained because Fisch explicitly states that the "developer solution dissolves the photoresist" in claim 5. Therefore, the developer constitutes a solvent dissolving photoresist as in the case of Honda even though such is not explicitly stated.

Appellant contends that the inherent teachings of Honda are refuted by the express teachings of Heller (US 5,178,989) that a developer cannot dissolve exposed or unexposed resist.

Even though the Heller characterization of a developer is contradictory to the characterization of developer by Fisch, both patents are deemed valid. The inherent teachings of

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Honda are supported by Fisch's claimed characterization of a developer to dissolve a photoresist. Fisch's claimed characterization leads one to believe that a developer constitutes a solvent and therefore, the developer used by Honda developer is a solvent used to remove the resist build-up.

Appellant contends that Isono does not anticipate the claimed invention because Isono does not teach vacuum device spacing.

To the contrary, Isono's vacuum device or suction conduit (5) [6] is distanced away from the substrate and therefore is spaced from the substrate.

Appellant contends that Kottman and Honda conflict in purpose such that one of ordinary skill in the art would not combine the teachings because Honda provides wafer processing with no need of cleaning devices and conversely Kottman's special treatment of the periphery elements eliminate the need for Honda's special pre-treatment.

This argument is not deemed persuasive because Appellant has mistaken the purpose of Kottman and Honda in that both seek to remove the edge bead from a coated wafer or substrate. Any further processing or lack thereof does not change their main objective to remove the edge bead.

Appellant contends that Kottman and Honda's treatment of the workpieces and edge dispensers conflict. Kottman treats a rotating circular workpiece with a stationary nozzle and Honda a rectangular workpiece with a dispenser moving around the workpiece edge. The references teach opposite of and away from the other's edge treatment technique such that one would not combine the references.

Regardless of the mobility or non-mobility of the dispenser on a predetermined shaped workpiece, Appellant's claimed invention broadly requires the incorporation of a vacuum about

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a nozzle that dispenses a solvent on any shaped wafer or substrate. The structural incorporation of a vacuum mechanism, as disclosed by Honda, about the solvent dispensing nozzle of Kottman is within the purview of the skill artisan, simply to enhance the removal of excess coating material, solvent, and/or solvent vapor given off by the treated substrate. The incorporation of a vacuum about the Kottman solvent nozzle would not physically destroy the Kottman dispenser or defeat the main objective of Kottman to provide for a uniformly resist coated substrate without the undesirable edge bead.

Appellant contends that the nozzle configuration and orientation of Kottman and Honda conflict.

This argument is not deemed persuasive because the modification of the Kottman apparatus to include a vacuum or suction device in the vicinity of the solvent nozzle dispenser and the edge of the coated substrate would not physically destroy the structure to Kottman regardless of the Kottman nozzle configuration or orientation.

Appellant contends that the Examiner has improperly relied on “obvious design choice” to justify the Kottman and Honda combination and has purported to using hindsight to conclude modifying Kottman’s nozzle to a perpendicular configuration and the Examiner should be reversed based on improper hindsight.

This argument is not deemed persuasive because the Examiner has not used improper hindsight but common sense. The modification of the Kottman nozzle to be perpendicular as shown by Honda merely requires changing the angle of the Kottman nozzle relative to the substrate. The function of the Kottman nozzle to apply liquid to the substrate to remove the edge

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bead would not change and therefore hindsight has not been used to result in such a modification.

Appellant contends that that the combination of Uchida with Honda is unobvious and should be withdrawn because of flaws in the Examiner's reasoning in terms of characterization of Uchida, the Examiner's belief concerning conventions in the art, the Examiner's motives for combination, the Examiner's announcement concerning the level of ordinary skill in the art, and the expressed conflicting teachings of Uchida and Honda.

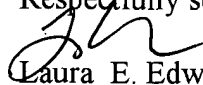
The configuring or positioning of the Uchida nozzle/suction device apparatus to be spaced from the substrate being worked upon is obvious. Honda reinforces the fact that the skilled artisan recognizes spacing of a nozzle/suction device from the substrate. The Examiner acknowledges that the translation of Uchida suggests both that a space of 180 $\mu$  can exist between at least the suction port (2) with respect to a coated substrate (see faxed translation p.2, top) and that the suction device can be placed in contact with the coating on the substrate (see faxed translation p.1; last paragraph). However, Uchida recognizes that the apparatus is manipulated because it is fixed into position [by the user] (see faxed translation, p.1, last paragraph, lines 3-5). Because Uchida discloses no structure that would prevent fixing of the nozzle/suction device into place, spacing of the device at a predetermined or desired distance would be obvious as is the conventional wisdom in the art as shown by Honda. The motivation for the spacing of the Uchida nozzle/suction device would be to substantially eliminate cleaning and clogging of the device. Finally, Appellant's claimed invention as rejected by Uchida and Honda is deemed to be within the level of ordinary skill in the art in spite of conflicting language disclosed in the Uchida translation alone.



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For the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,

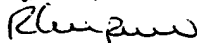
  
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September 30, 2003

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